



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/824,310 | 04/02/2001 | William R. Brown JR. | OB-193 | 9388 |

7590 07/27/2004
The Gillette Company
Prudential Tower Building
Boston, MA 02199

EXAMINER

COLE, LAURA C

ART UNIT PAPER NUMBER

1744

DATE MAILED: 07/27/2004

15

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/824,310

Applicant(s)

BROWN ET AL.

Examiner

Laura C Cole

Art Unit

1744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-14 is/are allowed.
- 6) ☒ Claim(s) 1,3-9,15,16 and 18-21 is/are rejected.
- 7) ☒ Claim(s) 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

1. Claims 1, 3-5, 15, 16, and 18-20 are rejected under 35 U.S.C. 103(a) as being obvious over Duey, USPN 1,901,230 in view of Beals et al., USPN 6,308,367.

The applied reference, Beals et al., has a common inventor (Michael Roberts) and a common assignee, Gillette Company, with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention

Art Unit: 1744

“by another”; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(I)(1) and § 706.02(I)(2).

Duey discloses the claimed invention including a head (7) comprising a support member which is circular in shape (8), a plurality of tufts of bristles supported at their base by the support member (9 and 10), two of the tufts having their bases adjacent to each other (such as two of the bristle tufts (9)), the two tufts being tilted away from each other at an acute angle relative to the support member (as shown in Figures 1-3). Further the plurality of tufts includes a third tuft (10) that has a different cross-section than the other two tufts (tuft (10) has a larger diameter and shorter bristles, Figure 2; Page 1 Line 97 to Page 2 Line 2). All of the tufts (9) are tilted along an imaginary circumference. Duey does not provide a bristle arrangement wherein a pair of tufts are tilted in substantially the same direction relative to a support member wherein the first

Art Unit: 1744

and second tufts of the pair have a different cross-section or a different cross-section and at least one of the tufts has a shape other than round.

Beals et al. disclose a toothbrush that has a head comprising a support member (All figures (14)), a plurality of tufts (Figure 6 (28), (32), (34), (36), and (38)) of bristles supported by their base by the support member, two of the tufts having their bases adjacent to each other and being tilted away from each other at an acute angle relative to the support plate (the two tufts being (34) and (38) as shown adjacent in Figures 6 and 7), wherein both have a cross section that is not round in shape and at least one of these is oval in shape (Figures 6 and 7), a third tuft that has a different cross section than the previous two tufts (Figures 6 and 7 (28)) that is also tilted at an acute angle relative to the support member (Figure 5.) Further, Beals et al. disclose a plurality of tufts wherein two of the tufts are tiled in substantially the same direction relative to the support member (the two tufts being (36) and (38), see also Figure 5) and having different cross-sections (Figure 6), wherein the first tuft has a different length than the second tuft (Figure 5; Column 3 Lines 4-57), wherein the first tuft has a different number of bristles than the second tuft (Column 3 Lines 4-57 disclose the preferred bristle thickness for all of the bristles to be between 0.005 and 0.009 inches in diameter with a particular surface area, therefore the larger surface areas have more bristles), and the angle of a third tuft (such as tuft (28)) is different from the angle of tilt of the first and second tufts (Figure 5). Beals et al. does not disclose a support member that is circular in shape but does teach that *this bristle arrangement is advantageous for cleaning hard to reach teeth* (Column 1 Lines 27-42).

Art Unit: 1744

It would have been obvious for one of ordinary skill in the art to modify the bristle structure and type of Duey for the one that Beals et al. teach so that the tufts may clean the teeth sufficiently, especially the teeth in the back of the mouth.

2. Claims 6-9 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duey, USPN 1,901,230 in view of Cyzer, USPN 3,129,449.

Duey discloses all elements above, however does not disclose a resilient cushion positioned adjacent a second side of the support member, a means for preventing the tuft from being withdrawn, and a thickened portion at the end of each tuft.

Cyzer discloses a toothbrush with movable elements that discloses a head comprising a support member (All Figures (1)) having a plurality of holes extending completely therethrough (as shown in Figure 1), a plurality of tufts of bristles with each tuft extending through one of the holes and having the brushing end projecting from a first side (Figure 1), means for preventing each tuft from being withdrawn from its hole (Figure 1 (5)), a resilient cushion positioned adjacent a second side of the support member so that the tuft can contact the cushion (cushion is Figures 1 (7) and 3 (7a)) so that each tuft is able to oscillate and rotate (Column 2 Line 45 to Column 2 Line 51). The preventing means is a thickened portion at the second end of each tuft being larger than the hole so as to not be pulled through (Figure 1 (5) or Figure 3 (6) is the thickened portion.) Two of the tufts are tiled away from each other at an acute angle relative to the support member as they rotate and oscillate about the axis (Column 1 Lines 22-26). At least one of the tufts has a cross section that is an oval shape (Figure 5).

It would have been obvious for one of ordinary skill in the art to modify the mounting structure of Duey for one with resilient cushions such as that Cyzer discloses so that they allow "free play" or a certain resiliency such that excess force or friction is not transmitted to the user's gums or teeth.

3. Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duey, USPN 1,901,230 in view of Berl et al., USPN 4,694,844.

Duey discloses all elements above, however does not disclose a resilient cushion positioned adjacent a second side of the support member, a means for preventing the tuft from being withdrawn, and a thickened portion at the end of each tuft.

Berl et al. discloses a toothbrush having a head that comprises a support member that has a plurality of holes (Figure 3 the support (4) and holes (8)), a plurality of tufts of bristles extending through the holes (Figure 1 (12)), means for preventing each tuft from being withdrawn from its hole being a thickened portion at the second end of the tuft and being larger than the hole (Figures 1-6 (14)), and a resilient cushion adjacent a second side of the support member (Figures 1-10 (18)).

It would have been obvious for one of ordinary skill in the art to modify the mounting structure of Duey for one with resilient cushions such as that Berl et al. teach so that excess force or friction is not transmitted to the user's gums or teeth.

4. Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duey, USPN 1,901,230 in view of Leira et al., USPN 2,935,755.

Duey discloses all elements above, however does not disclose a resilient cushion positioned adjacent a second side of the support member, a means for preventing the tuft from being withdrawn, and a thickened portion at the end of each tuft.

Leira et al. discloses a toothbrush having a head that comprises a support member that has a plurality of holes (Figures 3, 5, and 6 (26)), a plurality of tufts of bristles extending through the holes (Figures 1-6 (5)), means for preventing each tuft from being withdrawn from its hole being a thickened portion at the second end of the tuft and being larger than the hole (Figure 6 (28)), and a resilient cushion adjacent a second side of the support member (Figures 5-6 (20)).

It would have been obvious for one of ordinary skill in the art to modify the mounting structure of Duey for one with resilient cushions such as that Leira et al. teach so that excess force or friction is not transmitted to the user's gums or teeth.

5. Claims 1, 3-5, 15, 18, and 20 are rejected under 35 U.S.C. 103(a) as being obvious over Duey, USPN 1,901,230 in view of Bojar, USPN D434,565.

Duey discloses all elements above, however does not provide a bristle arrangement wherein a pair of tufts are tilted in substantially the same direction relative to a support member wherein the first and second tufts of the pair have a different cross-section or a different cross-section shape and wherein at least one of the tufts is not round in shape.

Bojar discloses a toothbrush head that has a support member and a plurality of tufts supported by the support member, having tufts adjacent to each other that are tilted away from each other (the groups of elongated tufts of bristles on that make up the

Art Unit: 1744

portion on the lower half of the toothbrush head) at an acute angle to the support member, at least one of these tufts cross sections is not round (again, the elongated tufts are more of an oval or ellipsoid), and the plurality of tufts include a third tuft that has a different cross section (the round tufts that are on the top portion of the toothbrush head.) See all of the figures, especially Figures 10 and 11. Bojar further discloses a toothbrush head that comprises a support member and a plurality of tufts of bristles supported at the base by the support member, a pair of tufts tilted in substantially the same direction relative to the support member, and a first tuft having a different cross-section than the second (the first tuft is one of the elongated tufts and the second tuft is one of the round tufts that are adjacent to the elongated tuft and situated on the outer perimeter of the head (Figures 5, 6, and 8 show that they are in substantially the same direction.) Bojar also discloses that the first tuft has a different number of bristles than the second tuft as they appear in the figures. Some of the tufts appear to be rectangular in shape (see Figures). A third tuft is included that is angled differently than the angle of tilt of the first and second bristles, the third tuft being the tuft on the center top most portion of the head that appears to be perpendicular.

It would have been obvious for one of ordinary skill in the art to modify the bristle structure and type of Duey for the one that Bojar teaches so that the tufts may clean the teeth sufficiently, especially the teeth in the back of the mouth.

Allowable Subject Matter

6. Claims 10-14 are allowed.

Art Unit: 1744

7. Claim 17 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter:

None of the prior art made of record comprises a plurality of tufts of bristles wherein a first one of the tufts is tilted along an imaginary radius which projects from a center of the circular surface and passes through a base of the first tuft and a second one of the tufts being tilted along an imaginary circumference which encircles the center of the circular surface and passes through a base of the second tuft. Further none of the prior art provides a third tuft tilted relative to the support member having a different length than the first and second tufts.

Applicants Arguments

9. In the response filed 27 May 2004, Paper No. 13, Applicant contends that:

A. The combination of Duey in view of Beals has been combined without attempting to show where the teaching or suggestion in one or both of the references that would motivate one skilled in the art to combine the references. The Examiner appears to have used the Applicants claim as a guide to pick and choose among the prior art.

B. The combination of Duey in view of Cyzer has been combined without attempting to show where the teaching or suggestion in one or both of the references that would motivate one skilled in the art to combine the references. The Examiner

Art Unit: 1744

appears to have used the Applicants claim as a guide to pick and choose among the prior art.

C. The combination of Duey in view of Leira has been combined without attempting to show where the teaching or suggestion in one or both of the references that would motivate one skilled in the art to combine the references. The Examiner appears to have used the Applicants claim as a guide to pick and choose among the prior art.

D. The combination of Duey in view of Bojar has been combined without attempting to show where the teaching or suggestion in one or both of the references that would motivate one skilled in the art to combine the references. The Examiner appears to have used the Applicants claim as a guide to pick and choose among the prior art.

Response to Arguments

10. Applicant's arguments filed 27 May 2004 have been fully considered but they are not persuasive.

A. Again, as stated above, Duey does not provide a bristle arrangement wherein a pair of tufts are tilted in substantially the same direction relative to a support member wherein the first and second tufts of the pair have a different cross-section or a different cross-section and at least one of the tufts has a shape other than round. Beals et al. provide a pair of tufts are tilted in substantially the same direction relative to a support member wherein the first and second tufts of the pair have a different cross-section or a different cross-section as well as tufts that have cross-sections that are not round

Art Unit: 1744

(Figure 6 displays that tufts such as 36 or 38 are not round, but ellipsoids) so that the *bristle arrangement is advantageous for cleaning hard to reach teeth* (Column 1 Lines 27-42).

B. Stated above, Duey does not disclose a resilient cushion positioned adjacent a second side of the support member, a means for preventing the tuft from being withdrawn, and a thickened portion at the end of each tuft. Cyzer provides a teaching of a resilient cushion positioned adjacent a second side of the support member so that the tuft can contact the cushion (cushion is Figures 1 (7) and 3 (7a)) so that each tuft is able to oscillate and rotate freely (Column 2 Line 45 to Column 2 Line 51.) It would have been obvious for one of ordinary skill in the art to modify the mounting structure of Duey for one with resilient cushions such as that Cyzer discloses so that they allow “free play” or a certain resiliency such that excess force or friction is not transmitted to the user’s gums or teeth.

C. State above, Duey does not disclose a resilient cushion positioned adjacent a second side of the support member, a means for preventing the tuft from being withdrawn, and a thickened portion at the end of each tuft. Leira et al. provides the teaching of a resilient cushion adjacent a second side of the support member (Figures 5-6 (20)) so that the user may brush the teeth with a minimum amount of pressure (Column 1 Lines 31-58). It would have been obvious for one of ordinary skill in the art to modify the mounting structure of Duey for one with resilient cushions such as that Leira et al. teach so that excess force or friction is not transmitted to the user’s gums or teeth.

D. Again, as stated above, Duey does not provide a bristle arrangement wherein a pair of tufts are tilted in substantially the same direction relative to a support member wherein the first and second tufts of the pair have a different cross-section or a different cross-section and at least one of the tufts has a shape other than round. Bojar teaches a toothbrush head that has a support member and a plurality of tufts supported by the support member, having tufts adjacent to each other that are tilted away from each other (the groups of elongated tufts of bristles on that make up the portion on the lower half of the toothbrush head) at an acute angle to the support member, at least one of these tufts cross sections is not round (again, the elongated tufts are more of an oval or ellipsoid), and the plurality of tufts include a third tuft that has a different cross section (the round tufts that are on the top portion of the toothbrush head.) Some of the tufts appear to be rectangular in shape (see Figures).

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

Art Unit: 1744

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura C Cole whose telephone number is (571) 272-1272. The examiner can normally be reached on Monday-Thursday, 7:30am - 5pm, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J Warden can be reached on (571) 272-1281. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LCC
LCC

26 July 2004

Robert J. Warden, Sr.
ROBERT J. WARDEN, SR.
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700